

**REMARKS**

Claims 1, 2, 5–7, 10, and 13 are pending in this application. By this Amendment, claims 1 and 5 amended. Support for the amendments and the new claims may be found, for example, in the original claims and the specification at paragraph [0031]. No new matter is added.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

**I. Rejections Under 35 U.S.C. §103****A. Liu and Chen**

The Office Action rejects claims 1, 2, 6, 7, and 10 under 35 U.S.C. §103(a) as obvious over Liu et al., Chem. Mater., 13:1984–1991 (2001) ("Liu") in view of U.S. Patent Application Publication No. 2004/0106003 to Chen et al. ("Chen"). Applicants respectfully traverse the rejection.

Amended claim 1 requires that "x is in a range of from 5 to 50 mol%" and "y is in a range of 50 to 95 mol%." The combination of Lui and Chen do not disclose these ranges.

In claim 1, x is the molar fraction of the binaphthyl derivative structural units and y is the molar fraction of the aryl structural units in the EL polymer. If x is too small, then the color stability of the polymer is affected. However, if x is too large, the luminescence efficiency of the polymer may be decreased. Therefore, x lies in the range of 5 to 50 mol%. If y is too small, the luminescence efficiency of the polymer may be decreased. If y is too large, the color stability of the polymer may be affected. Thus, y lies in the range of 50 to 95 mol%. *See* specification at paragraph [0031].

The Office Action, on page 6, concedes that Lui and Chen fail to mention the molar fraction of the dinaphthyl derivate, but asserts the range of the molar fraction of x would have been obvious in the absence of unexpected results. Optimization of ranges is not obvious

where a range is critical. MPEP §2144.05. The range of molar fraction of x and y is critical, and it would not have been obvious to modify the molar fraction of the combination of Liu and Chen to arrive at the recited ranges. Therefore, the combination of Liu and Chen would not have rendered claim 1 obvious.

For at least these reasons, Liu and Chen would not have rendered obvious claim 1. Claims 2, 6, 7, and 10 depend from claim 1 and, thus, also would not have been rendered obvious by Liu and Chen. Reconsideration and withdrawal of the rejection are respectfully requested.

**B. Liu, Chen, and Grazulevicius**

The Office Action rejects claims 5 and 13 under 35 U.S.C. §103(a) over Liu and Chen in view of Grazulevicius et al., Prog. Polym. Sci., 28:1297–1353 (2003) ("Grazulevicius"). Applicants respectfully traverse the rejection.

Claim 13 depends from and requires all of the limitations of claim 1. Claim 5 also requires, among other things, all the limitations of claim 1. The Office Action provides no suggestion or basis for concluding that Grazulevicius teaches or suggests that the results obtained by the claimed invention discussed above would have been expected. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

**II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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